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title: What is SUAVE? hide\_title: true description: SUAVE is a decentralized platform for fast and private off-chain computation. keywords: - flashbots - suave - docs - build - mechanisms

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import List from '@site/src/components/List/List.tsx'; import Video from '@site/src/components/Video/Video.tsx';

# What is SUAVE?

SUAVE, the **Single Unifying Auction for Value Expression**, is a decentralized platform for fast and private off-chain computation.

SUAVE enables you to:

- Build blocks on other chains
- Define private compute
- ♀ Store private data
- Access off-chain data
- Interface with many different MEV components:
  - ⚡ Plug into existing MEV infra: i.e sending bundles to block builders, relays, validators or sequencers
  - Build totally new MEV infra: i.e. create unique SUAPPs on SUAVE

SUAVE exhibits three key differences from existing blockchains:

- Programmable privacy
- Credible off-chain computation
- Faster block time (compared to Ethereum L1)

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## Why SUAVE matters

Additional context which has inspired SUAVE:

- [The Future of MEV is SUAVE](#)
- [MEVM Centauri and Beyond](#)
- [Bankless episode about "What is SUAVE?" with Phil Daian and Andrew Miller](#)

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## Architecture

SUAVE is a fork of go-ethereum, with additional precompiles for MEV applications (**SUAPPs**) and a modified runtime to enable confidential computation (**the MEVM**).

We call the primary protocol actor a **Kettle**. A Kettle contains a modified version of a Geth node (the "MEVM") and a confidential data store. A Kettle can compute over confidential data sent to it, add that data to its local store, and only broadcast specific information, or "hints", to the wider public.

SUAVE has public and private state. Public state is accessible on the SUAVE Chain, which currently runs Clique POA Consensus (for fast iteration, to be changed in future releases). To access private state, we use "Confidential Compute Requests".

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## Contracts and Transactions

A SUAPP is a smart contract deployed on SUAVE, just as a Dapp is a smart contract deployed on Ethereum. [Deploying contracts](#) is largely the same as any EVM chain.

Transactions can differ, because they can contain data encrypted for specific actors (i.e. Kettles and/or other contracts). These are ["Confidential Compute Requests"](#).

Confidential Compute Requests are handled via a modified RPC in each Kettle, and executed by the "Modified Ethereum Virtual Machine", or "MEVM".